



Atty. Dkt. No. 032026-0726

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Lixiang Wei, et al.

Title: DUAL BRIDGE MATRIX  
CONVERTER

Appl. No.: 10/601,061

Filing Date: June 20, 2003

<p><b>CERTIFICATE OF MAILING</b></p> <p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below.</p> <p><u>Harry C. Engstrom</u> (Printed Name)</p> <p><u>[Signature]</u> (Signature)</p> <p><u>June 15, 2004</u> (Date of Deposit)</p>
---

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop MISSING PARTS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English and relate to frequency converters, matrix converters, and bidirectional sinusoidal waveform frequency converters..

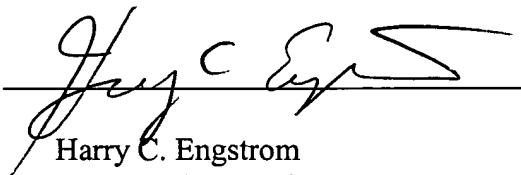
Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350.

Respectfully submitted,

Dated: June 15, 2004

FOLEY & LARDNER LLP  
Customer Number: 23524  
Telephone: (608) 258-4207  
Facsimile: (608) 258-4258

By   
Harry C. Engstrom  
Attorney for Applicants  
Registration No. 26,876

Form PTO-1449 (MODIFIED) JUN 17 2004 COPY 3064 PATENT & TRADEMARK OFFICE	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 032026-0726	SERIAL NO. 10/601,061
<b>INFORMATION DISCLOSURE CITATION</b> Submitted: June 15, 2004 (Use several sheets if necessary)		APPLICANT Lixiang Wei, et al.	
		FILING DATE 06/20/2003	GROUP ART UNIT

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
		4,628,425	12/9/86	Venturini, et al.			

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
		EP 1 280 263 A2	1/29/03	EPO				
		EP 1 289 112 A2	3/5/03	EPO				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Marco Venturini, Alberto. Alesina, "The Generalized Transformer: A New Bidirectional Sinusoidal Waveform Frequency Converter with Continuously Adjustable Input Power Factor," IEEE Power Electronics Specialists Conference Record 1980, Atlanta, GA, June, 1980, pp. 242-252.
		Lixiang Wei, T.A. Lipo, Ho Chan, "Matrix Converter Topologies with Reduced Number of Switches," Proceedings of IEEE Power Electronics Specialists Conference, PESC '02, June 23-27, 2002, pp. 57-63.
		L. Wei, et al., "A Novel Matrix Converter Topology with Simple Commutation," Proceedings of 36th IEEE Industry Applications Society Conference (IAS '2001), Chicago, Illinois, USA, 2001, Vol. 3, pp. 1749-1754.
		J.W. Kolar, et al., "Novel Three-Phase AC-DC-AC Sparse Matrix Converter," Proceedings of 17th IEEE Applied Power Electronics Conference and Exposition, APEC 2002, Vol. 2, 2002, pp. 777-791
		M. Baumann, et al., "Part II: Experimental Analysis of the Very Sparse Matrix Converter," 2002, pp. 788-791.

EXAMINER

DATE CONSIDERED

- \* **EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.